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Well-elderly Clinics: An Alternative to Institutionalization

by: Karen J. Theisen
Montana Department of Health and Environmental Sciences

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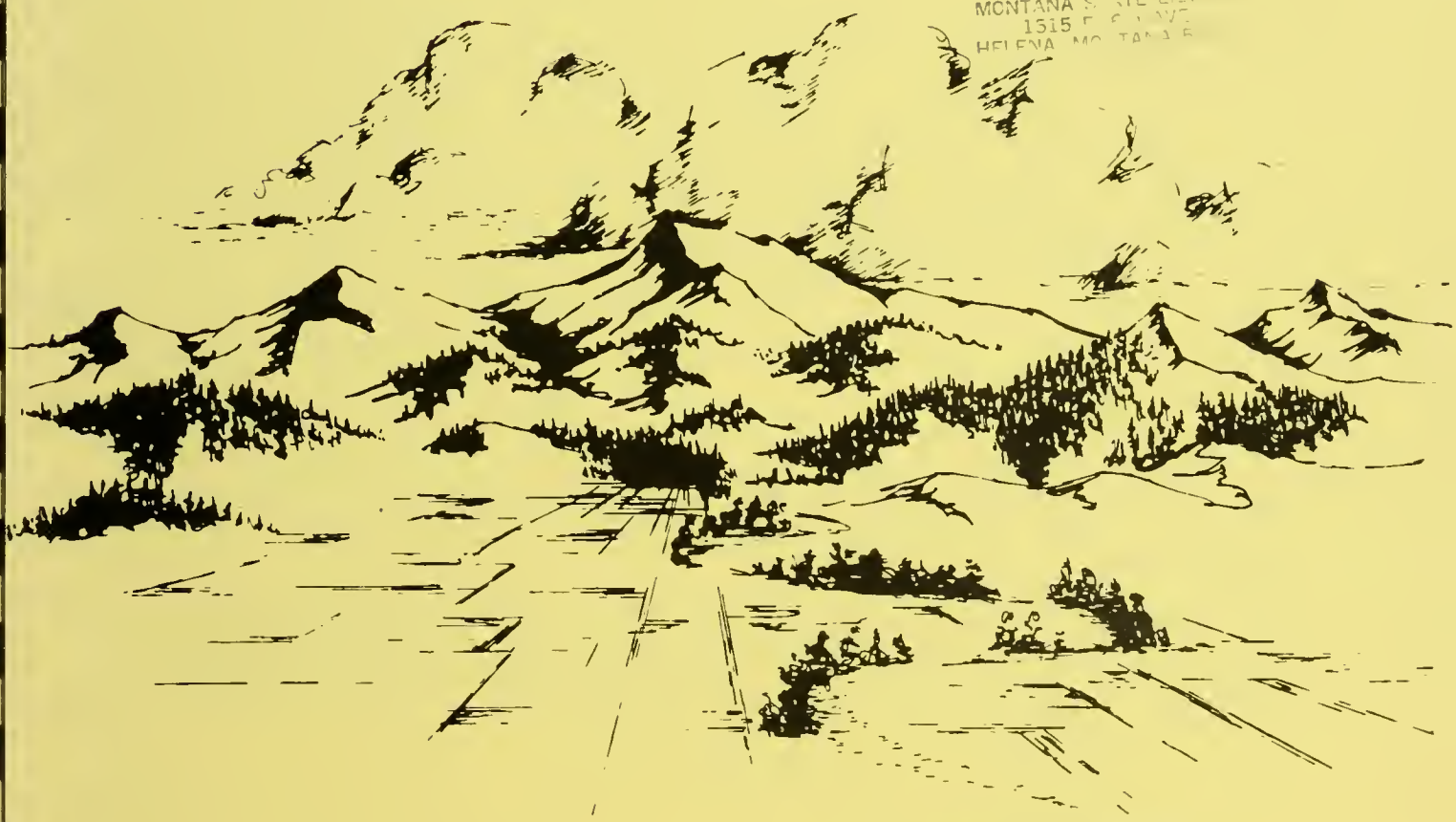

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WELL-ELDERLY CLINICS:
AN ALTERNATIVE TO INSTITUTIONALIZATION

by Karen J. Theisen
August, 1979

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Project Committee Members:

Audrey Atkinson
Holly Luck
Althea Ginnebaugh
Don Moore

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Karen Theisen, a WICHE Intern, is a resident of Great Falls, Montana. She is currently attending Carroll College to complete a Bachelor of Arts degree in Nursing.

ABSTRACT

This paper is designed to ask several questions and raise a number of issues. The reader is asked neither to agree nor disagree, only to consider the issues which are discussed.

In May of 1979, the State Health Planning and Resource Development Agency (SHPDA) of the Montana Department of Health and Environmental Sciences established the purpose and goals of a study regarding "well-elderly clinics" as an alternative to institutionalization. The ultimate goal being, the provision of a written report of the findings, complete with recommendations for the development of a well-elderly primary health care center demonstration model utilizing a multi-disciplinary approach.

Issues to be considered were the health aspects of aging; efficiency and cost-effectiveness of nurses as primary health care providers; prevention and promotion; and a survey to study the availability and acceptability as well as the continuity and quality of present primary health care services.

In general, it was found that the elderly have unique health care needs which require a continuous mode of health services to remain active and productive. These services are not readily available, accessible, continuous, or affordable in Montana, thus forcing the elderly into premature institutionalization.

Recommendations and models are presented as alternatives to institutionalization.

This study is by no means exhaustive. It should be considered as an introduction to an area in which more research must be accomplished.

INTRODUCTION

We will all grow old, an inevitable fact. However, some people will age faster, while others will enjoy better health. There is one common denominator for all of us in the aging process and that is along with growth in maturity and wisdom will come a decline in physical and mental capabilities.

> "The body slows down; there is less vigor and decreased physiological reserve. Homeostasis, the steady state, is more easily disrupted and harder to reestablish." [1]

Age is not an indicator of a person's ability to function physically or mentally. There are difficulties, however, encountered by the aged which, if left unrecognized, may increase the numbers of physically and mentally impaired.

The numbers of elderly are constantly on the increase. In the U.S. each day, over four thousand Americans reach the age of sixty-five. Life expectancy has doubled since 1850. [2] The elderly 65 years and older make up approximately 10 percent of the U.S. population, yet account for 30 percent of health care costs. Eight out of ten elderly suffer from one or more chronic diseases, while only four out of ten under the age of 65 suffer from chronic diseases.

There is far too much unnecessary hospitalization, permanent and inappropriate institutionalization (which is estimated nationally at 20 percent), use of an ambulance as a main source of transportation, and the over-use of medication.

A University of Michigan survey of the elderly's health needs revealed that "...most of the health problems of persons older than 65 are not due to the aging process itself. Rather, they suffer from the physical and social insults which their environment casts upon them." [3]

It is documented elsewhere that considerable morbidity is related to the health systems' deeds of commission or omission; and that the elderly are often quite dissatisfied with the health care they receive. [4]

There is a need to dispel many of the misconceptions harbored by people today about the elderly. Older people are not all alike and are not all senile. Neither are the elderly primarily a physically sick group or needing to be warehoused in nursing homes. The intermediate care which is required by many of our elderly is not available, thus forcing them into long-term care facilities which, in turn, accelerates the proliferation of nursing homes.

> "Between 1960 and 1970, nursing home facilities increased by 140%, beds by 232%, patients by 210%, employees by 405%, and expenditures for care 465%. There are more nursing home beds (1.2 million) in the United States than medical/surgical beds (1 million)." [5]

Obviously, the present health care system is ineffective in recognizing and assisting the elderly with their health care problems. There is a great deal of evidence that with the proper expansion of preventive and health

promotion efforts throughout the life cycle, the disabling effects of chronic disease may be lessened or perhaps prevented. The type of care sought for the elderly is that of primary health care with stresses on prevention of illness and promotion of health. More specifically, primary health care is the point of contact at which an individual enters the health care system. The primary care provider then assumes responsibility for the continuum of care with regards to prevention, maintenance of health, evaluation and management of symptoms, and appropriate referrals.

In 1975, over 104 billion dollars was spent in this country for health care, 30 percent of which was spent on persons over the age of 65. The fact that less than four percent of the total 104 billion dollars went for preventive health care indicates that most of the money spent for health care was spent "after the fact". There is a need for care which recognizes the physiological, biological, psycho-social, cultural, and spiritual needs of the elderly and an awareness of the value of health promotion and disease prevention.

An approach must be made to improve the quality and appropriateness of elderly health care, as well as filling many of the gaps in primary health.

DEMOGRAPHICS

NATIONAL TRENDS*

In this section, significant national trends relating to the elderly will be discussed. An awareness of demographic and service trends offers a general framework within which to plan and implement services for the older population.

Older persons are increasing rapidly both numerically and proportionally. Census data documents well the increases in those persons 65 years and older. The latest population data indicates the following: 12.3 million in 1950, 16.6 million in 1960, and 20.2 million in 1970. It is further estimated that the numbers will increase to 23.5 million in 1980, 27.5 million in 1990, and 30 million by the year 2000.

While the numbers of elderly increase, they are also becoming a larger percentage of the total population. The following statistics reveal that percentage: In 1950 the elderly represented 8.1 percent of the total population, by 1960 it climbed to 9.2 percent and by 1970 the percentage increased to 9.9. Population projections indicate the elderly will comprise 10.4 percent in 1980 and 11.1 percent in 1990. The year 2000 expects to see an increase to approximately 18 percent of the population being elderly.

The over 65 age group continues to grow at a greater rate than the population as a whole. In several decades the increase was quite substantial. For instance, between 1950 and 1960, it increased by 34.7 percent while the population as a whole increased by 18.5 percent. The decade following saw the percentage rate of elderly increase by 21.1 percent, where as the total population increased by only 13.3 percent. Statistics indicate these figures will continue to rise steadily.

The life expectancy of people has also increased. At the age of 65, males can expect to live approximately 13 additional years. Females also may expect to live an average of 16 years longer. The reasons for the extension of life expectancy are three-fold; the advent of technological advances, improved health care, and preventive treatment. However, in order to promote independent living for extended periods of time, additional preventive and supportive facilities must be established.

Women outnumber men in the age group of 65 years and older. In 1960, there were 121 women for every 100 men, and in 1970, there were 138 women for every 100 men. Future estimates indicate that for every 100 men there will be 144 women by 1980, and by 1990 the figure will increase to 148 women.

Economically, financial security deteriorates as one grows older. This is partly due to the mandatory retirement age. The sum a person has saved to retirement becomes inadequate after a given length of time. The elderly then rely on a fixed source of income for financial security (e.g., Social Security, SSI, Savings, etc.). This financial instability limits the elderly's ability to cope with inflation, high cost of health care, and diminishing assets.

* Data from Gerontological Planning Associates Development Plan.

MONTANA*

Montana is a sparsely populated state which is located in the Rocky Mountain Region. Montana has a distinguishing characteristic because of its size (four in the nation) and by the diversity of both people and the natural environment. With distances averaging 550 miles in length to 275 miles in width, Montana covers 147,138 square miles.

Topography of Montana includes mountain crests (Western third of State), elevated plains, low mountains, and erosion valleys (Central portion), and flat terrain (Eastern). Most of Montana is considered rural with the exception of Billings and Great Falls who qualify as "Standard Metropolitan Statistical Areas".

According to the 1976 Census, the population of Montana was estimated at 761,000 residents. The 1980 projection estimates an increase to 790,000 population. Since 1970, Montana's total population growth rate has averaged about 1.5 percent per year, in comparison with the national growth rate of 1 percent.

The following table indicates the number and projected numbers of those 65 and older by county. **

The male/female ratio in Montana has shifted from an excess of males in 1960 to slightly more females in 1970. Although there is not an exact figure of male/female ratio in the 65+ age group, it is estimated that the differentiation is .9 percent which is slightly lower than the national average.

Montana has a large minority group of Native Americans. The Indian population in our state has relatively high birth and death rates. At the present, there are 1,645 (4.8%) Native Americans 65+ in Montana.

The Veteran population in Montana is quite significant. There are approximately 107,000 Veterans between the ages of 55 and 65. Statistics indicate this number is growing. Between 1970 and 1979, the population increased from 7 to 8 percent of the total population.

One of the most significant socio-economic and demographic characteristics of Montana is its population growth as a whole. It is estimated that there has been a 13 percent increase or an estimated 90,000 since 1970. This fact indicates a need for additional primary health care to keep this ever-increasing population as wellness oriented as possible.

* Information obtained from State Health Plan.

** Montana Population Projections

POPULATION PROJECTIONS BY COUNTIES 1975 - 2000

65 & OLDER -28-

	1975	1980	1985	1990	1995	2000
Beaverhead	890	956	944	931	908	884
Big Horn	761	824	891	956	984	1,013
Blaine	753	754	730	708	689	669
Broadwater	338	347	368	390	391	396
Carbon	1,358	1,418	1,411	1,404	1,351	1,314
Carter	271	276	259	243	225	206
Cascade	7,250	7,958	7,701	7,444	7,334	7,238
Chouteau	761	804	781	758	721	683
Custer	1,498	1,654	1,799	1,931	1,985	2,023
Daniels	458	450	476	499	474	452
Dawson	987	1,146	1,286	1,421	1,565	1,701
Deer Lodge	1,944	2,022	2,175	2,327	2,236	2,145
Fallon	403	457	472	484	516	547
Fergus	1.949	2,010	2,061	2,111	2,110	2,116
Flathead	4,595	5,002	5,623	6,240	6,765	7,309
Gallatin	3,017	3,290	3,679	4,060	4,254	4,485
Garfield	168	178	221	264	260	256
Glacier	916	1,006	1,147	1,288	1,288	1,488
Golden Valley	143	140	153	165	164	164
Granite	328	356	401	445	433	421
Hill	1,567	1,671	1,941	2,210	2,334	2,460
Jefferson	593	643	668	691	703	735
Judith Basin	416	456	451	444	438	434
Lake	2,335	2,507	2,512	2,515	2,533	2,600
Lewis & Clark	3,625	3,991	4,458	4,908	5,221	5,534
Liberty	218	246	271	295	307	321
Lincoln	1,146	1,354	1,562	1,769	1,880	1,990
McCone	291	295	328	361	356	353
Madison	874	878	839	801	729	689
Meagher	272	273	288	301	285	278
Mineral	266	280	306	332	335	343
Missoula	4,978	5,475	6,157	6,837	7,341	7,845
Musselshell	648	641	654	667	614	571
Park	1,715	1,773	1,887	2,002	2,035	2,070
Petroleum	49	48	49	51	43	36
Phillips	718	727	741	755	753	750
Pondera	731	783	813	844	863	887
Powder River	196	190	206	220	240	259
Powell	694	699	732	764	801	845
Prairie	292	323	331	340	321	307
Ravalli	2,828	3,038	3,143	3,231	3,240	3,377
Richland	1,110	1,312	1,416	1,511	1,559	1,592
Roosevelt	1,005	1,063	1,144	1,224	1,249	1,273
Rosebud	909	940	959	957	935	1,003
Sanders	1,074	1,137	1,158	1,178	1,207	1,251
Sheridan	715	754	805	856	829	802
Silver Bow	5,113	5,136	4,986	4,837	4,526	4,237
Stillwater	744	765	795	824	821	826
Sweet Grass	532	549	479	409	366	325
Teton	801	851	934	1,018	1,011	1,004
Toole	592	603	635	665	629	593
Treasure	135	143	138	134	134	136
Valley	1,043	1,047	1,141	1,234	1,316	1,409
Wheatland	369	356	354	352	309	275
Wibaux	187	184	192	200	188	177
Yellowstone	8,020	9,128	10,602	12,075	13,444	14,814
TOTAL						

HEALTH STATUS - MONTANA

Since the era of Hypocrates centuries ago, society has defined health in terms of disease and illness. The problems of health have been viewed as physical and/or mental conditions requiring medical intervention. Although many infectious diseases have been wiped out through the use of vaccines, a problem still exists with regards to chronic disease. This aspect is continuously viewed in an illness-oriented context; therefore, chronic disease incapacitates many persons who may have been helped with a wellness-oriented health care system.

> "Today there is a growing realization that the definition of health, rooted solely in its negative implications, is inadequate. There is a growing interest in defining health in positive terms; to define health in positive terms of wellness; to define what health is as opposed to what it is not; to seek solutions which aim at the promotion of health, not merely eliminating illness."

MORTALITY

Actual deaths of those persons 65+ increased slightly between 1970 and 1977. In 1970, 4,115 actual deaths were reported and in 1977, 4,168 deaths were reported at an increase of 53 deaths.

CAUSE OF DEATH

The causes of death have changed enormously over the past years. The infectious and parasitic diseases which killed vast numbers of people 50 years ago are no longer among the leading causes of death. By 1975, two-thirds of the deaths in the United States were due to diseases of the heart, malignant neoplasms, and cardiovascular disease in those 65 years and over.

In Montana, the leading causes of death per 100,000 persons are:

Heart Disease	282.4
Cancer	155.6
Cerebrovascular	75.7
All Accidents	75.4
Influenza and Pneumonia	20.1
Arteriorsclerosis	18.9
Suicide	18.8
COPD	15.4
Cirrhosis of the Liver	13.1
Diabetes Mellitus	11.7

CHRONIC CONDITIONS

Incidence of chronic disease has been determined nationally by surveys and medical records review. The following chart indicates the prevalence rates of chronic disease in those persons 65 years and older.

Chronic Conditions	Sex	65 Years and Older
Heart Conditions	both	23.5
	male	25.2
	female	22.2
Arthritis & Rheumatism	both	23.2
	male	15.6
	female	29.4
Back or Spine Impairments	both	3.2
	male	3.1
	female	3.3
Hypertension	both	8.7
	male	6.0
	female	10.9
Visual Impairment	both	9.8
	male	8.6
	female	10.7
Mental & Nervous Condition	both	3.4
	male	3.0
	female	3.8
Diabetes	both	6.8
	male	5.7
	female	7.7
Asthma	both	2.1
	male	2.8
	female	1.6
Emphysema	both	4.4
	male	7.9
	female	1.6
Hearing Impairments	both	2.3
	male	2.5
	female	2.1

Of the above chronic conditions, hypertension is particularly problematic. Only 10 to 20 percent of the estimated 23 million hypertensive individuals in the U.S. are receiving effective treatments; and half are not even aware of the fact they have hypertension. Since high blood pressure increases the risk of developing heart disease, the leading cause of death in the U.S. and Montana, and since effective management of the problem is possible, locating persons with high blood pressure and helping them to obtain treatment is crucial. There is an estimated 86,900 individuals in Montana with high blood pressure.

Also to be noted is the high incidence of arthritis and cancer. Effective health screening programs could initiate a change in lifestyle to a wellness view of life. This, in turn, could minimize, postpone, or wipe out many of the chronic debilitating diseases in the State of Montana, thus preventing premature introduction to the nursing homes.

HEALTH AND AGING

The needs of the elderly are multifaceted and quite different than the needs of other age groups. In order to provide quality health assistance to the elderly a thorough understanding of these problems must be accomplished.

The material that follows dwells on the health aspects of aging and will help the reader begin to see the relationship between the structural and functional changes in the human body, diseases that may damage life, and the steps and systems that can prevent illness, preserve well-being and help make the most of the disabled individual's ability to function independently. If we are to provide health services for the aged, we must base these services on the actual problems that the elderly encounter to ensure the meeting of their needs. It is essential that programs and policies be based on accurate data.

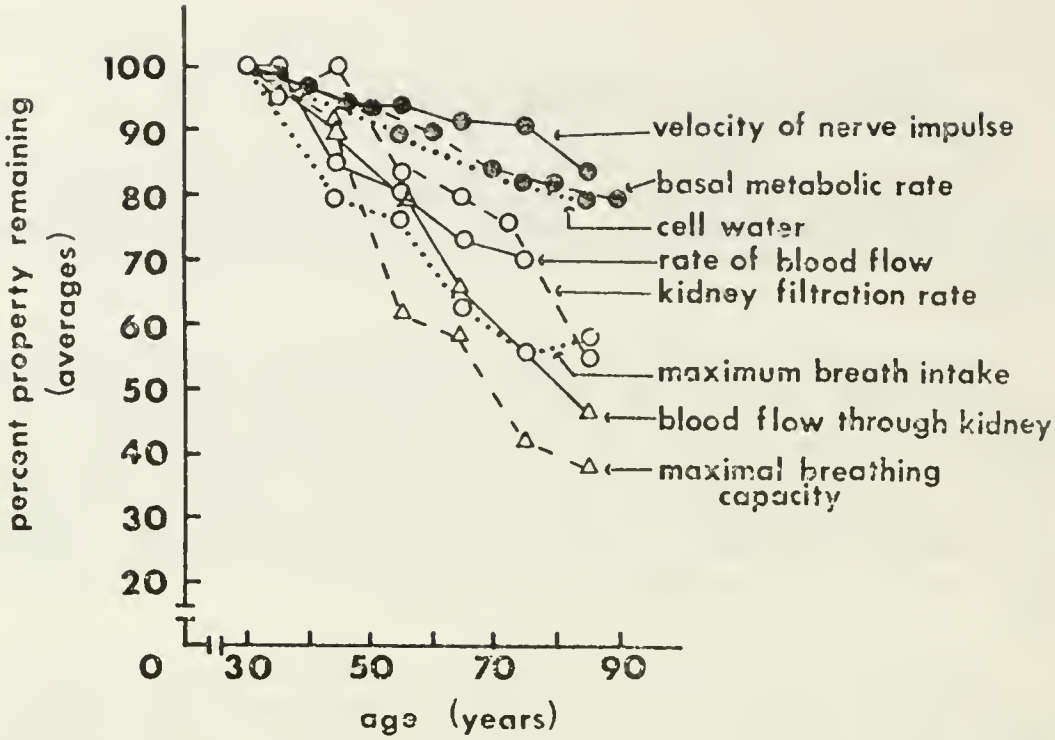
Aging can be measured in two ways, chronologically (according to the time elapsed since birth) or biologically (in terms of vital capacity, and functional performance). [6] To determine which is the cause and which is the effect of aging is difficult to define. By examining the organism in terms of its systems and tissues, individual cells and molecular components, it is hoped a more thorough understanding of aging can be accomplished.

An area which needs to be defined is in aging and disease. It is a misconception that aging and disease are synonymous.

> "With age, death rates in a population increase. The incidence of many diseases--such as cardiovascular disease and cancer--increases with age. These diseases generally take a long time to develop, and for this reason appear characteristically in older people. But this is not the whole story, for the individual himself changes with time in ways that may increase susceptibility to certain diseases." [7]

Aging in man is characterized by a gradual decline in many physiologic activities. The following graph indicates the age changes in human physiologic functions. [8]

Environmental factors are influential in the health and the length of life a person will have. [9] Areas of study include the ability of a low temperature in reducing metabolic activity and extending life span, effects of radiation (both x-ray and cosmic) on an organism, injury to the skin by chronic exposure to ultraviolet light, air pollutants, nutrition, education in areas of cleanliness, rest, exercise, and general phychologic outlook, detrimental activities of tobacco smoke and drugs, and the ability of extreme alcoholism to harden the liver. [10] All the above, taken into consideration, lead us to believe that environmental factors have a direct influence on the quality of life one will lead.



(Redrawn from Shock, N. W. The science of gerontology. Jeffers, F. C. (Ed.). Proceedings of Seminars 1959-61. Durham, N. C.: Council on Gerontology, Duke University, 1962)

The manifestations of aging appear at every level of the complex biological system. The best documentation is that of the generalized decline in functional capacity as well as the environmental factors in relation to longevity.

In general, aging is considered to be a universal occurrence among all human beings, and any incidence of disease within that population is normal. Aging, as an entity, must be considered normal and any deviation from that norm, may be considered a disease. The question is now asked, "How can occurrence of such diseases as cancer and cardiovascular ailments be so widespread?"

"We now enter a realm of speculation, based on the catalog of observations. For example, we may assume that every individual has a potential for cancer. Cancer does not always appear because of defense mechanisms in the body. However, if, in aging, the body loses strength in these mechanisms and if the body encounters a strong enough cancer-causing agent, the disease will appear. Some theorists believe that the appearance of at least some cancers in the elderly reflects the deminishing strength of the immunologic system." [11]

Atherosclerotic disease exemplifies a relation between disease and aging. [12] Many factors may be operating in this instance. Atherosclerosis is commonly known as "hardening of the arteries" which is due to the accumulation of fatty substances on the arterial lining. [13] Risk factors contributing to the rate and development of atherosclerotic disease include high blood pressure, excessive sugar and lipid (fat) in the blood. [14] In essence, the diet, an organ's involvement in sugar metabolism, and an individual's reaction to stress play important roles in the prevention of a fatal blockage or occlusion of a major artery feeding the heart muscle, resulting in a heart attack.

The body's vulnerability to various diseases such as vascular complications, cancer, or other types depends on the body system under attack. The potential of dying from one or more of the above increases with age.

"...there is a great variety in functional and structural changes with age. In some organ systems, change with age is relatively slight; in others, dramatic. Peculiarly, dramatic structural changes may not necessarily produce dramatic functional losses, to the extent of jeopardizing an individual's survival. Also striking is the extent of the human body's reserves; the body may lose much, but plenty may remain to keep it going comfortably, if not overstressed." [15]

The changes observed in the human body must be judged for their significance on health in a holistic manner, for some individuals may manage well with a disability while others may do poorly. For this reason periodic maintenance and promotion of health is important. Some of the biological changes in aging have been discussed. Various environmental problems have also been reviewed. The remainder of this section will concern itself with specific health problems encountered by the elderly in relation to physiological, psycho-social, and cultural changes.

PHYSIOLOGICAL

The normal process of biologic changes from birth to maturity is augmented; however, from maturity onward, the process shifts and tends to deliquesce. These processes are influenced by the occurrence of injury and disease. [16]

Chronic diseases will affect almost all of the elderly. Some will have one chronic disease, while others may have several. Chronic disease, however, can often be controlled, enabling an individual to function normally. [17]

> "80% or more of the population will have one or more chronic diseases or disabilities by age 65. 30-40% will have significant impairment in eyesight or hearing. At least an equal number will have some degree of arthritis. 25-30% will have some signs and symptoms of atherosclerotic cardiovascular disease and almost as many will have some evidence of 'dementia' or depression. More than 15% will have diabetes mellitus." [18]

Research has indicated the major physical needs of the elderly as arthritis, diabetes, hypertension, hearing loss, vision impairment, heart disease, bronchitis, fibrosis, emphysema, cancer, osteoporosis, and nutrition.

A brief summary follows as to the physiological basis for the development of various diseases. Working With Older People: A Guide to Practice, by the Department of Health, Education and Welfare, is the primary resource for the following. [19]

Cardiovascular

The pumping action of the heart (cardiac output) diminishes with age. This decrease in the pumping causes a decline in the volume of blood flowing to various organs. The flow to the brain and vessels serving the heart muscle itself is reduced less than the flow to many of the other tissues.

The arteries become less flexible with age causing the heart to work harder in forcing the blood throughout the body. This loss of resiliency is independent of the atherosclerotic process. It is caused mainly by the fragmentation of arterial elastic fibers and the deposition of calcium. Old arteries have about one-half the flexibility of young ones.

With this increased vascular rigidity, both the systolic component (the blood pressure measured when the heart contracts) and the diastolic component (the between beat pressure) rises to what is commonly known as high blood pressure. The smaller vessels at some distance from the heart exhibit an increased resistance to blood flow, therefore, the tissues of the legs are endangered. The aorta attempts to compensate for the loss of elasticity in other cardiovascular components by enlarging, and if the pressure continues to increase, this main artery runs the risk of rupture.

Excretory

At birth, each human kidney contains about one million excretory units (nephrons). These nephrons increase in size until maturity, and then slowly decrease with age. Between the ages of 25 and 85, the number of nephrons decrease by 30-40%, but are still sufficient to maintain normal human activity. With this reduction of nephrons, the excretory capacity of the kidney also declines.

Respiratory

Respiratory infections which occur during childhood decrease with age as immunities are built up. The frequency of colds decrease from five or six per year to about one per year in old age. However, these infections are much more likely to cause death in the elderly.

Physiological changes occur in the chest as the back-to-front diameter increases, a progressive humping (kyphosis) of the spine and rounding of the shoulders occurs. The compliance of the chest wall as well as the force of the expiratory muscles is reduced. The lung of the aged becomes increasingly rigid.

The diaphram flattens as the ribs elevate during the third and ninth decades of life. This causes a decreased ability of the lungs to move air in and out of the lungs. When an elderly person is at rest, there is an increased residual volume in the lungs. Forced expiration does not rid the lungs of this excess air.

The increased rigidity of the chest wall and decreased strength of the expiratory muscles contribute a great deal to the inability of the elderly to cough effectively. This has an extremely important clinical consideration due to the fact that without an effective, productive cough, the lungs tend not to clear themselves of normal secretions. The secretions left in the lungs become an excellent media for the growth of microorganisms.

Gastrointestinal

There are various significant changes in the gastrointestinal system. The function of the gastrointestinal tract is impaired by the loss of teeth, impaired swallowing mechanism, and deminishing gastric and enzyme secretions. There appears to be less absorption of nutrients and minerals and a reduction in the motility of the stomach. The decreased volume of saliva contributes to the dry tongue of the aged which in turn may contribute to the reduced taste sensation.

Intestinal peristalsis is decreased due to generalized muscle weakness; therefore, constipation is a common complaint.

Gall stones also occurs more often with age. It is apparent that the normal mechanisms which prevent stone formation become progressively less efficient with age. Gall stones may aggravate other gastrointestinal problems.

Endocrine

Metabolic changes that the elderly experience are varied. Some changes experienced are the reduced production of gonadal hormones, and decreased cortisol secretions. The brain produces excess follicle-stimulating hormones which are believed to be responsible for the failure of ovaries to function, and symptoms of menopause.

One of the most significant changes is in the decreased ability of the body to metabolize sugar, or glucose. This is evident when the concentration of sugar in the blood of a 75 year old person is measured two hours after ingestion of a sugar load. The load will be, on the average, 30 percent higher than that of a younger adult. This glucose tolerance curve tends toward that of a diabetic, and a danger of vascular and other types of complications from an inability to metabolize sugar results.

Musculoskeletal

The musculoskeletal system experiences four major changes. The first change is the decrease in muscular strength, endurance, and agility. Secondly, postural changes occur due to structural changes in the ligaments, joints, and bones. The ligaments ossify and calcify, joints and ligaments stiffen due to erosion of cartilagenous joint surfaces, and ossification and degenerative changes occur in the lining of joint cavities. Thirdly, there is a greater incidence of spinal curvature, and finally, bones become porous and lighter predisposing an individual to fracture.

Nervous System

The nervous system is too complex to provide a comprehensive view of the whole system. The area which is perhaps the most important is the loss of brain cells which occurs in maturity to old age. The number of brain cells lost may be as much as 45% in some areas.

Despite the losses in brain cells, which are not replaced, the brain appears to have a great reserve capacity to perform adequately which the structural damage. Intellectual function appears to be sustained in most persons.

Sensory Organs and Sensation

There is a decrease in visual acuity and in the ability to accommodate to near vision. There is also a decrease in clarity; as in cataracts and glaucoma.

Audiometric studies indicate an inability to hear higher pitches, and that word discrimination is altered. The voice has a lower volume and speech is at a slower rate.

The number of taste buds in the tongue decrease from an average of 248 in children to 88 in individuals 75 to 85 years of age. The elderly also lose acute sensations of touch and have a slower reflex time.

PSYCHO-SOCIAL

The study of psycho-social development examines personal behavioral changes across the life cycle. Psycho-social behavior is indicated by an individual's capacity or ability to adapt behavior to the demands of the environment.

In the previous pages, we have been concerned primarily with the prolongation of physical existence. However, this idea is only part of the reasonable societal goal for the elderly. There must also be concern for the quality of life one will lead. The elderly have very unique social and emotional needs, and the lack in meeting these needs causes a decline in the level of function of the individual.

> "Frustration of these needs leads to wasting of the individual's unique potential, to his dependence upon society rather than contribution to it, and to his suffering a consequent sense of failure or guilt." [19]

The successful adaptation to a number of life's tasks is crucial for the emotional health of the elderly. A major task for some of the elderly is coping with the loss of a spouse, loss of social relationships, social roles, jobs and related associates, income, mobility, and physical health. Also is the loss in the opportunity to be recognized and to do meaningful work. Financial resources, housing, and health and social involvement are all involved in the complexities of emotional responses and capacities. [20]

Another major task of the elderly is related to the "Eight Stages of Development" as determined by Erickson. The elderly have reached the final stage of development known as "Integrity vs. Despair." This stage involves the development of a self-image in regards to one's intrapersonal forces which mold the perception of the self and the psycho-social considerations which aid in shaping, polishing, and modifying the perception of self. [21] At this point in time an evaluative review of life is undertaken by the aged. This life-review permits the person to perceive their accomplishments, failures, satisfactions, and disappointments. All of these are characteristic of a life theme. The life theme, for example, may be a search for the final fulfilling of the self, so that a positive resolution may be reached to allow the person to view his life as satisfactory. If life has been termed "successful" and the person feels there is a prospect of continued social and emotional security, then one's value as a person will not diminish.

It is still another task for the elderly to remain active in order to retain a suitable function. [22] The elderly need to be encouraged to maintain physical activities, social interaction, emotional and intellectual activities which provide a constant stimulus, and the feeling of independence with regards to activities of daily living. The cessation of these important functions may lead to unnecessary physical limitations as well as psychological and social isolation, disorientation, and apathy.

For some older adults, maladaptive behavioral changes may be the result of biologic, social or phychological aspects of aging. The aged are involved in a transition from a well stabilized psycho-social maturity of the personality to one of decline. One begins to look back at the past with feelings of nostalgia and at a future with apprehension and feelings of insecurity. These stresses coupled with the losses become too demanding; earlier methods of coping no longer relinquish the despair, anxieties, helplessness and lonliness. When the problems encountered by the aged go unrecognized and unsolved, daily functioning is inhibited. The results are varied from non-psychotic organic brain syndrome, psychoses, (not attributable to physical condition), to neuroses such as: simple depression, severe depression, paranoia, manic depression, and hypochodriasis.

Another demension which deserves consideration is the interrelationships one needs to exist. From infancy to maturation one exists totally within the complex social structure. It becomes apparent to him that he may not exist when isolated for any long periods of time, particularly when it is felt that the isolation has no end. In our culture today, we do just that. We isolate the aging into a state of aloneness.

> "Aloneness, of course, is a result of a number of factors. A very real one is the dispersal and death of friends and members of the family." [23]

The older person must then adjust to these changes.

> "Each loss necessitates a rearrangement of the equilibrium which he had set up for comfortable functioning. Each loss, too, releases the energy which was previously invested but which now needs a new object on which to be attached." [24]

When the aged attempts to attach himself to a new object in his environment, he meets societal resistance. This energy is then turned inward and it begins to cause somatic complaints and a recapitulation of a past life experience. [25]

CULTURAL

The culture patterns, some of which are economics, health, politics, kinships, religious and social class, play an important role in the determination of variables involved in complex human behavior. The society in which a person lives and the culture or subcultures one shares in that life also has a significant impact on aging and the aged. [26]

Cultural patterns diversify judgements and systems of believe and integrate them with other cultural patterns. As a result of this blending, a clearer understanding is reached of the effects one or the other pattern has on the individual and the new cultural pattern he has developed. [27]

The values one incorporates from an acceptance of a particular pattern causes the formation of an attitude towards the aged and later towards himself as an aging person.

> "If in our society the aged are perceived as unattractive, unproductive, old fashioned, useless, querulous, etc., then we in our youth absorb these concepts, make them a part of ourselves and apply them to ourselves in later life." [28]

Briefly, let us consider some of the culture patterns and the influence they have on the social relationships of the elderly.

The majority of the elderly are entwined in a web of social relationships through various resources such as family, religious organizations, business or work place, and other institutions. This web or "social network" changes throughout the life cycle, but, for the most part, the family remains one of the most significant aspects of involvement. [29]

As a person ages, and he becomes more frail in terms of physical and psycho-social concepts, he becomes a taker rather than a giver of help.[30] In most instances this taking is within the family context; however, it is estimated that one million elderly have no surviving kin which results in the elderly seeking out other areas of support.[31]

Friendships are also a part of the continuous life pattern. Losses of friends throughout the life cycle due to death, institutionalization, or by moving away, are sometimes replaced by new friends. The elderly need a constant source in which to find interpersonal relationships.

The elderly's involvement in senior centers is on the increase although they still represent the minority. These centers are available to provide social networks, reduce isolation, and the provision of various health tasks. The majority join for the content of the center and are generally "life-long" members.[32]

Institutionalization is often a result of a depletion in the social network and resources available to the elderly. Through a multi-disciplinary approach with regards to holistic health care, many of these networks can be reestablished.

The term "old" has very negative connotations in our society. It is often associated with maladjustment, dependency, chronic illness, and institutionalization.[33] The cliche has gone unchallenged for many years. Many health professionals assume that the elderly are set in their ways, and that any treatment for illness is only an extension of suffering, and, therefore, concentrate their efforts on the young. However, many problems of the elderly may be relieved through timely multidisciplinary interventions.

The misconception of the term "old" affects the elderly themselves, as they consider physical and mental problems to be a normal condition of their aging process.[34] This, in turn, results in a reluctancy of the aged to obtain health care for chronic problems until they result in institutionalization.

> "When increasing age, physical frailty, and associated problems necessitate the help of others, most older people find themselves in an impossible conflict. Many will deny they have problems or refuse to consider help. Others become hostile to those who can and will help. Some will simply withdraw in an attempt to buttress their self-esteem."[35]

The answer lies in the education of the elderly to promote trust in the services which may be available to them, and the promotion of self-esteem to draw those who can profit from services out into the open.

HEALTH SERVICES

As far as the needs of the elderly are concerned, existing health services and facilities are quite fragmented. There is no comprehensive program which provides a continuum of care ranging from preventive health screening and community education to supportive home health care. Services can be designed to take advantage of a community's and family's resources to mitigate the problems of inappropriate placement in nursing homes by providing a broader range of alternatives for the elderly.

Society offers little or no choices with regards to health promotion, and instead encourages placement at secondary and tertiary levels of health care. It promotes dependency of the individual on the system instead of promoting and providing for maximum independence both physically and psychologically. The services provided today for the elderly are neither continuous nor comprehensive in nature.

Early detection of chronic disease is possible and essential so that the full-range of health care services can be utilized to prevent progression of or at least minimize the more serious manifestations or complications of chronic disease. The same idea applies to managing already diagnosed chronic disease. Severe complications may be postponed or eliminated by proper maintenance.

The elderly will ordinarily seek medical help with the abrupt onset of acute disease. However, chronic disease is insidious, with symptoms often going unnoticed until irreparable harm has been done before seeking medical attention. The older person deteriorates until he can no longer sustain himself at home, he becomes isolated from family and friends, prematurely seeks admission to the nursing home. The best way to prevent such occurrences is a periodic health examination. Unfortunately, at the present time, there are many obstacles preventing those who need primary health care; examples of these obstacles include the lack of availability of primary care facilities and the high cost of health care.

By alleviating complicating problems and providing services to promote health, a few months or years of satisfying life can be possible for an individual who may soon give up his home and contact with his friends and family to live in an institution.

We must seek to provide our older generation with adequate health care to enlarge their autonomy and independence.

> "If autonomy means anything, it must refer to the right and power to choose freely for oneself the sort of life one wishes to lead."[36]

An organized preventive health care program for the elderly in Montana is virtually non-existent. The piecemeal nature of existing programs is reflected in the sporadic blood pressure clinics and lack of comprehensive health screening.

In the preceding pages, we have seen what unique needs the elderly have and the problems they face. There is no network of service alternatives for the varied and changing needs of the elderly. The emphasis of social and health care delivery systems has been on fitting the individual requirements of the elderly to the system rather than designing the system to meet the requirements of the aging population.

It appears that a need clearly exists for a comprehensive screening program for the older population. The program can be designed to meet the needs of the elderly in the provision of an integrated and balanced approach to prevention, health maintenance, and promotion of good health. The service should be fully integrated with other aspects of health care, and should fit the life patterns of the community it would serve to continuously meet the needs and demands of the clientele.

When looking into the future, if we are ever going to do something worthwhile in cardiovascular disease, cancer and unnecessary institutionalization, it will depend on our ability to motivate the population and ourselves towards preventive health care.

PRIMARY HEALTH CARE STATUS

The physican, both in private and group practice, has been and is today, the foundation for primary care. However, it has been documented that the availability and accessibility to primary care physicians is decreasing due to maldistribution of physicians and the advent of specialty practices. This aspect, coupled with the consumer's demands for available, accessible, quality, continuous, and affordable primary health care services has become an overwhelming burden on the medical community involved in the provision of primary health care.

The status of primary health care, involving both the physician and consumer, is a matter of great concern. Alternatives must be explored to relieve the physicians in their time consuming health appraisals and referrals in addition to assuring the consumer that his health care needs will be met with the use of a comprehensive primary health care system.

The nurse among other health providers, in an expanded or extended role is a viable alternative to the present system where, for the elderly, primary health care is not universally available, reasonably priced, accessible, or holistic in nature. The new roles of the nurse are uniquely and properly a part of nursing in the provision of health care, not medical care. The extended role is meant to be complementary and supplementary to the physician rather than a substitute or an antagonist. As technology advances and greater expectations are placed on physicians and nurses for the delivery of primary health care, so must they advance within the realm of their respective professions.

For the elderly in our society, access to primary health care is first a human need, and second, a health need. In moments of anxiety, most of us need access to someone who is readily available to alleviate some stresses. Many need someone to talk with and receive advice. The many facets of wellness oriented primary health care can be provided efficiently and effectively by the nurse.

The primary focus should be placed on the needs of the population rather than the needs and images of professional disciplines. This will lead to the most effective use of manpower and accomplish more comprehensive primary health care to those in need.

REVIEW OF LITERATURE

Since the identification of the nurse practitioner movement in the mid-1960's, numerous studies have documented the successful use of nurses as primary health care providers. This summary will review studies which have demonstrated the feasibility of the nurse in the primary role.

Areas of concentration in the review include ambulatory patient care, efficiency and cost-effectiveness of nurses as primary care practitioners, preventive and health care promotion, acceptability of nurses as primary care providers by physicians and clientele, and availability, continuity, and quality of primary health care services.

Acceptability of the nurse in the role of primary health care provider by consumers and physicians continues to be a subject of great concern. However, Lewis and Resnik[37] in a study to evaluate nurses in ambulatory patient care at the University of Kansas Medical Center, found the nurse widely accepted in this role. The following data resulted from the study. The greatest number of clinic clients in this study consisted of women over the age of 50. Initial testing had indicated a strong preference for physicians in the performance of most health functions. A year following the introduction of the nurse conducted clinic, significant changes were noted. Of the 33 clients assigned to the nurse clinic, 31 indicated the acceptance of the nurse in the primary role. Also noted was a significant increase in the visits to the nurse clinic (345) as compared to the physician clinic (153).

Availability of the health care services by nurses was significant. There was a marked increase in adherance to appointment schedules, and time in the clinic was utilized to a better extent as indicated in the time and motion study below.

Time and Motion Studies

Distribution of Time (average time minutes)	Physician	Nurse Clinic
Waiting	58 (57%)	5.5 (9.7%)
Clerical	4 (5%)	3.5 (6.3%)
Professional	35 (38%)	49 (84%)
TOTALS	97	58
Range for Professional Time	19-64	25-74
Number of Observations	16	52
Broken Appointments	10.1%	5.4%

The continuity of care received by the clients in the nurse clinic is evident from the following statistics. Prior to the initiation of the nurse clinic, 70% of the clients in the nurse conducted clinic were seeing physicians outside of the medical center whereas 50% in the physician clinic sought outside help. At the conclusion of this study, 50% of the physicians' clients were still seeking other physicians, while only 13% of the nurse clinic clients sought outside assistance.

Quality of care is of great importance in evaluating nurse clinics. In Lewis and Resnik's study, it was found that the nurse clinic patient's satisfaction with quality of care received was greater than that of the physician group.

The following chart indicates the cost-effectivess of nurses in the primary role of health provider.

Group	Value of Time of Therapist (Per Hour)	Average Duration of Visit	Number of Visits	Cost of Outpatient Care	Duration (Days)	Cost of Inpatient Care
Nurse Clinic	$4.50	30 min.	345	$776	45	$2,475
Physician	12.00	15 min.	150	$459	68	$3,740

TOTAL COST: Physician - $4,199
Nurse - $3,251

AVERAGE COST PER PATIENT: Physician - $127.24
(Per year) Nurse - 98.51

Other projects are described in which nurses have assumed more responsibility in the role of primary health care provider.

Thibodeau and Hebert addressed acceptability of the nurse in a pilot program at the University of Connecticut School of Nursing in Mansfield, Connecticut, to provide the Senior Citizens Center with an ambulatory health care clinic.[38] The clinic which was opened two times weekly had 333 visits by 95 senior citizens in six months.

Spitzer, et al, provided an indepth study of the Burlington randomized trial of the nurse practitioner in a large suburban Ontario project.[39] The goal of the project was to substitute nurse practitioners for physicians in primary care practice. In the study, 1598 families were utilized, and 96% of those assigned to the nurse practitioner were satisfied with the care received. The number of families in the clinic increased by 41% after one year. The nurse practitioners were able to provide comprehensive care to two-thirds of their clients without consultation. In the management of care, 69% of the nurse practitioner clients and 66% of the physician clients rated management as adequate.

"The results demonstrate that a nurse practitioner can provide first contact primary clinical care as safely and effectively, with as much satisfaction to patients, as a family physician. The successful ability of the nurse practitioner to function alone in 67% of all patients' visits and without demonstrable detriment to the patients has particularly important implications in planning of health care delivery for regions where family physicians are in short supply."[40]

Greenfield, et al, studied the efficiency and cost of primary care by nurses at the Southern California Kaiser Permanente Health Facility in Inglewood, California.[41] The study includes patients with acute illnesses who telephone for a same day appointment. The study, after five months, indicated that the nurse was able to evaluate patients rapidly while maintaining a quality of care comparable to that provided by the physicians. The nurses spent only four to nine minutes longer with the patients than did the physicians.

The cost-effectiveness of the nurses was contributed to the considerable salary differential between the nurse and physician as indicated in the chart below.

Component	Average Visit Costs (M.D.)	Average Visit Costs (Nurse)
Manpower	$ 5.84	$ 3.15
Lab Tests	8.43	7.35
Medications	2.48	2.89
COMBINED	$16.75	$13.39

There was a 20 percent reduction in combined average visit costs.

A cost-effectiveness study by O'Hara-Devereaux, et al, of nurse practitioners in primary care at nine sites in California, five of which were predominantly rural, indicated the success of nurse practitioners in availability and cost-effectiveness.[42]

Nurse practitioners worked 38-40 hours per week in professional activities while the physician worked 50-60 hours per week, not including after hours calls. The nurse practitioner saw 75-80 percent of her patients without consultation with most of the care in preventive and health promotion.

The following chart indicates cost-effectiveness of the nurse practitioner in the O'Hara-Devereaux study.

	Nurse Practitioner	Physician
Patients/day	17.1	25
Patients/annum	4,104	6,000
Charge/patient	$ 11.30	17.30
Gross Income	$46,375.00	$103,800.00
Salary	$17,151.00	$ 58,077.00

Howard Lewis reported on the nurse practitioner in health education and prevention at the University of California at Davis.[43] The program at Davis was organized in 1970 to teach and train family nurse practitioners to perform 60-80% of routine tasks normally undertaken by the physician.

Lewis reports that the family nurse practitioners are . . ."competent, sincere, and highly trained nurses -- oriented to helping people and making changes in society's attitudes toward medical and health care. Patients who have been treated by family nurse practitioners are overwhelmingly happy with their encounters . . ."[44]

Other indicators of the success of nurse practitioners is the ability and desire of the practitioners to spend more time with patients to explain the process of disease and how an individual can live a healthier life despite a disease.

> "Acting for and in concert with the physician, the family nurse practitioner could become one of the nation's best resources to reduce the rate and length of hospitalization by encouraging people to take care of themselves. That could lead to a beneficial impact on the cost of medical care."[45]

Chambers, et al, reported on a project titled "A Controlled Trial of the Impact of the Family Practice Nurse on Volume, Quality, and Cost of Rural Health Services."[46]

In 1973, the School of Nursing and the Faculty of Medicine of Memorial University of Newfoundland developed cooperatively a program for education and deployment of expanded role nurses in primary care.[47] Twelve thousand people in 20 villages participated who were isolated from any additional health care. The nurse practitioner was the only health professional visiting two villages on regular basis.

The following chart indicates the acceptability and costs of employment of nurses in the expanded role as determined by Memorial University.

Location of Visit	Study Group	Baseline	Study	Percent of Change
Hospital Outpatient Visits	Nurse	1,742	1,127	- 35
	Phys.	2,125	2,024	- 5
Primary Care Visits within community	Nurse	554	1,583	+ 186
	Phys.	393	483	+ 23
TOTAL PRIMARY CARE VISITS	Nurse	2,296	2,710	+ 19
	Phys.	2,518	2,507	-----

There was a 12 percent decrease in hospital admittance in the nurse group and a slight decrease in the physician group. Days in the hospital per 1,000 persons decreased by five percent in the nurse group and increased by 39 percent for the physician group. Lab tests increased for both disciplines, 105 for nurses and 57 percent for physicians.

ECONOMIC

Category of Service	Study Group	Baseline	Study
Hospital Outpatient Visits	Nurse	$ 13,360	$ 9,440
	Physician	16,300	15,770
Primary Care Visits - community	Nurse	3,390	12,830
	Physician	1,600	1,920
Outpatient X-ray	Nurse	1,790	1,720
	Physician	2,030	2,140
Outpatient Lab	Nurse	60	120
	Physician	110	170
Subtotal (Primary)	Nurse	$ 18,600	$ 20,000
	Physician	20,040	20,000
Hospital Inpatient (Acute)	Nurse	41,700	39,660
	Physician	39,080	54,160
Hospital Inpatient (Chronic)	Nurse	7,830	21,920
	Physician	34,070	38,570
Total Estimated Cost	Nurse	$ 68,130	$ 85,690
	Physician	$ 93,190	$112,730

In short-term results it was found that there was a slight increase (29 percent) of nurse practitioner's cost due to travel expenses and more time spent with patients. Patient expenditures, however, decreased due to a decrease in hospital visits, decreased waiting time, and decreased need for babysitters, gas, etc.

This indicates that on a long-term basis, nurses will be cost-effective as people move more into the community rather than into long-term hospitalization.

Weinstein and Demers reported on a nurse practitioner clinic in Darrington, Washington, a small community of about 1,100 population.[48] The clinic has not been able to attract and keep a physician. The nearest medical facility is 30 miles down a fairly treacherous mountain road.

The study indicated a consistent increase in the percent of clients willing to see a nurse practitioner for their next health service.

Kaku, Gilbert, and Sachs compared the health appraisals by nurses and physicians at a health appraisal center in Honolulu, Hawaii.[49] Records of 1,000 clients receiving physical exams were reviewed.

Results indicated nurses had a tendency to record abnormalities more completely than a physician, yet did have some oversights in auscultation of heart and breath sound. Failure to detect significant signs and symptoms did not occur.

The concurrence of both positive and negative findings was significantly high. These findings support the validity of nurses in performing physical examinations with a great deal of accuracy. More concise statistics reveal that in five percent of the cases the physician found a sign or symptom which a nurse did not, and in 14.4 percent of the cases, the nurse found a sign or symptom that a physician did not.

The statistics uncovered in the review of literature favorably uphold the belief that the nurse can, with accuracy, provide primary health care screening in an acceptable, efficient, and cost-effective manner.

SURVEY

A preliminary survey was conducted at the Senior Citizens' Center in Helena, Montana in the form of a questionnaire to elicit information regarding the availability of primary health care services in the community and the acceptability of a new primary health care screening center. The health screening center's services would be provided by nurses and/or faculty and students in health related fields to those ambulatory persons age 55 and older in an attempt to avoid or allay institutionalization by promoting and maintaining good health. The survey is an introduction to a formal needs assessment which will be performed at a later date. Methodology for the needs assessment is in the formative stages.

The Senior Citizens' Center has a population of 1901 elderly. Of those 95 (4.98%) participated in the survey. Responses were tabulated and analyzed in the following tables. The tables do not add up to 100% due to some persons answering a question with more than one answer.

TABLE 1

Population Characteristics

Cohort	Number	Age (median)
Men	41	71
Women	54	69
Both	95	70

TABLE 2

Attitude Toward Seeking Medical Care

Question	Answer		
	Men Percent	Women Percent	Both Percent
Do not have problems	24.3	29.6	27.3
Long waiting period at Health Care Facility	19.5	20.3	20.0
Cost is too high	68.2	55.5	62.1

TABLE 3

Attitude Towards Need for Primary Health Care Center

Question	Answer		
	Men Percent	Women Percent	Both Percent
Yes	87.8	74.0	78.9
No	0.0	3.7	2.1
I don't know	12.1	18.5	15.7

TABLE 4

Acceptability of Health Screening Facility
Manned by Nurse, Faculty & Students

Question	Answer		
	Men Percent	Women Percent	Both Percent
Yes, I will give it a try	82.9	83.3	82.1
Yes, Use as main source of Care	26.8	16.6	21.0
I don't know	9.7	9.2	9.4

RESULTS

Analyses of data indicates that the high cost of health care is a major problem to many of the elderly. Of those surveyed, 62.1 percent responded that cost is too high when seeking medical care. The elderly viewed the need for a primary health care screening center positively. The sample revealed 78.9 percent favored the introduction of a primary health care screening center in their community. As a whole, the sample indicated that if a primary health care screening center staffed by nurses and/or faculty and students in health related disciplines was introduced, 82.1 percent would give it a try, and 21.0 percent of the sample said they would use the center as a main source of primary health care.

Transportation, which is often a deterrent in seeking health care, did not appear to pose a problem for those sampled. 87.8 percent of the men and 72.2 percent of the women have access to a car for transportation. The Senior Citizens' Center also provides a bus for transportation for those in need as 10.5 percent responded.

Traveling too far for health care services was insignificant in the survey. However, it is anticipated that those living in the more rural areas may have such a problem as comprehensive health care services become more scarce.

The survey results warrant the continued investigation of primary health care screening centers staffed by nurses and/or faculty and students in health related disciplines as an alternative to institutionalization for the elderly.

RECOMMENDATIONS

In view of the material presented, the following recommendations are made:

1. The general public of Montana must recognize and acknowledge to a greater extent the unmet needs and changing desires of the elderly population. As one means of accomplishing this, existing programs for the elderly should have far greater exposure in the news media. The Aging Services Bureau and the Department of Health and Environmental Sciences could work cooperatively to provide for public relations.

2. Open up avenues of communciation between the medical and nursing professions so that they may come to the realization that each profession offers a special and unique service which is complementary and not antagonistic of the other. With an acceptance of this concept is the realization that the only dominance lies within the priority decreed by the needs of the client. The result is a group of potential services grouped together, none dominating the other, waiting to respond to the needs of a client in that particular area.

3. The confusion that the public, medical community, as well as the nurses themselves, elicit as a response to the "extended role" of the nurse must be eliminated to utilize the nursing profession to their fullest potential. The nursing programs today are much too varied with respect to length and content. All of these differing programs then turn out nurses who are rendered the same licenses and the same positions, yet their educational backgrounds differ significantly. The baccalaureate nursing programs must come together to educate their students with the same objectives in mind. These objectives should also include primary health care theory and clinical experiences in the field of primary health care. The Master's level programs can then expand on the baccalaureate programs to include specialty practices with more sophisticated assessment and management skills. These specialist practitioners would then be capable of providing direct care for selected groups (e.g., elderly).

   The responsible and orderly preparation of nurses at these two levels could logically improve the conflict among the health professions and public as well as improve the overall status of primary health care.

4. The elderly in Montana should be educated with regards to their health needs and to the availability of nurses in meeting those needs as primary health care providers. The elderly should be well aware of any and all alternatives to institutionalization.

5. In either an existing or newly developed senior center, an on-site health screening center should be set up as one major component of the overall service program. It would serve the older residents of the community with an emphasis on health promotion and maintenance. It should be multi-disciplinary in approach to the varied health problems which the elderly face. It should serve as a central health screening and referral service center which would establish linkages with physicians, hospitals, long-term care institutions, mental health, home health care, and senior citizen programs.

   Potentially, the health screening center could become a vehicle for coordinating disparate health services into an effective delivery system in the rural setting at less cost. The community-based health care service will deliver and integrate a wide range of health, social, and other services for the purpose of preventing premature institutionalization.

   Prior to the development of a health screening center demonstration project, a three-county needs assessment of the elderly must be accomplished to determine the most appropriate site. Data on specific needs and present health care services available to the elderly in Montana are incomplete and should be defined.

   The needs assessments should be done in three major areas:

   1) A county which includes a college or a university. The college or university must have several health disciplines educated within the institution.

   2) A county which is primarily urban.

   3) A county which is primarily rural. Based on the results of the study, the area found to be most feasible should be used for the health screening demonstration project for the elderly.

6. An evaluation program should be initiated at the onset of the demonstration project. This evaluation process will constantly assess and reassess the program's effectiveness and potential of expansion into the more rural areas.

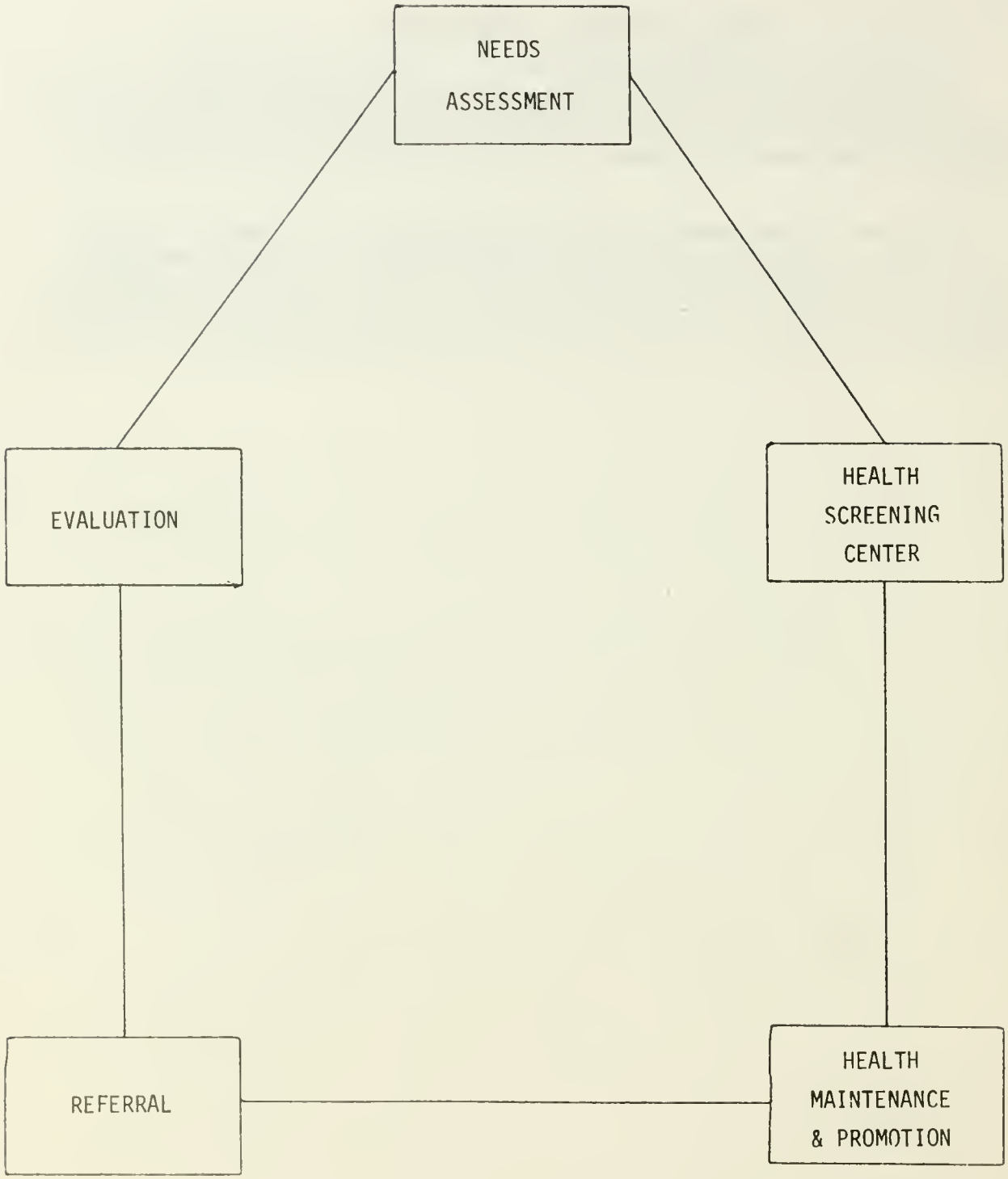
7. One of the following two models should be utilized in a demonstration project at a site which has been found to be the most appropriate as a result of the needs assessments.

8. Funding for the demonstration project is available from grants at the Federal level. The State Health Planning and Resource Development Agency would research and provide additional information regarding Federal grants.

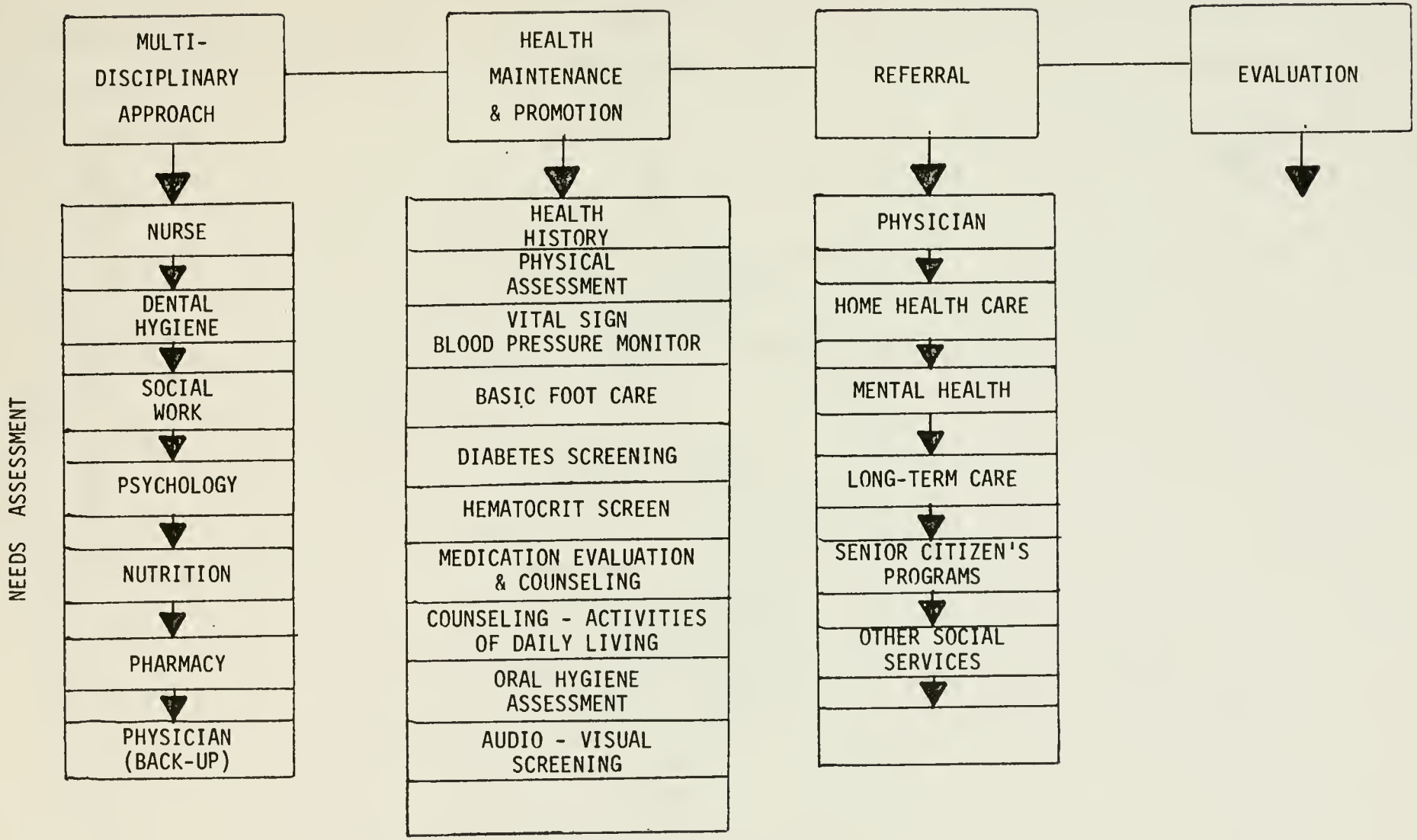
HEALTH SCREENING PROGRAM MODEL

An overall well-elderly health screening program model and two separate program models for both a rural area and an urban area are presented in this section. These models are based on recommendations which were presented earlier.

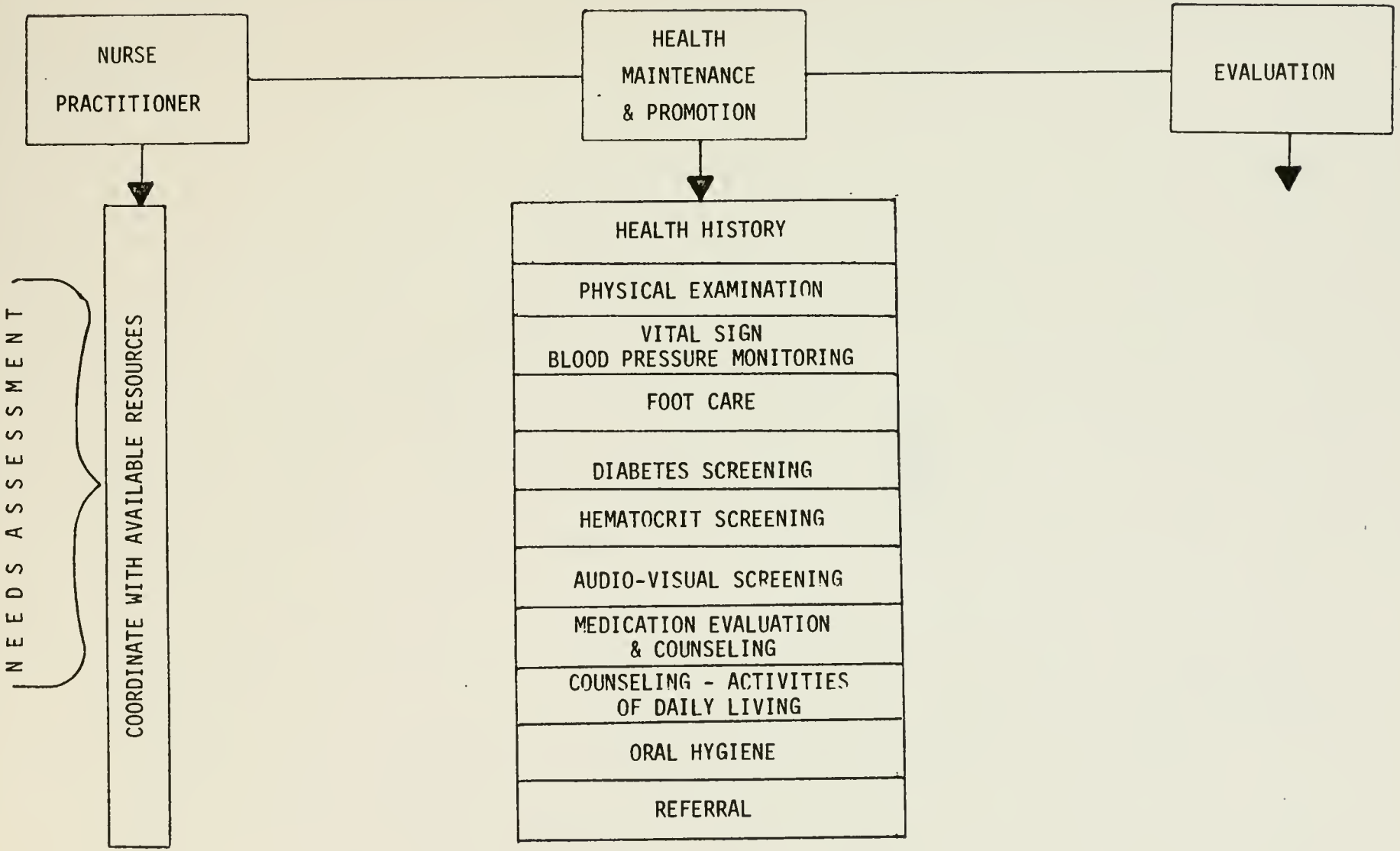
For each of the models, specific recommendations are made in relation to manpower, range of services and referral systems. It should be noted that these are recommendations based on the overall analysis and understanding of the elderly and their health problems. Alterations in the models may be made as an analyses of specified sites are accomplished prior to implementation.



HEALTH SCREENING PROGRAM MODEL



WELL-ELDERLY RESOURCE/TREATMENT MODEL



RURAL WELL-ELDERLY SCREENING MODEL

APPENDIX

ACKNOWLEDGEMENTS

ACKNOWLEDGEMENTS

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FOOTNOTES

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ATTACHMENTS

FIRST MEETING OF THE ADVISORY COMMITTEE ON AMBULATORY SERVICES FOR THE WELL-ELDERLY-- Tuesday, July 10, 1979 1:00p.m.

I. Literature Review

A. Areas of Concentration

1. Ambulatory patient care.

2. Efficiency and cost-effectiveness of nurses as primary care practitioners.

3. Preventive and promotive health care.

4. Acceptability of nurses as primary care providers by physicians and clientele.

5. Availability, continuity, and quality of primary health care services.

B. Summary

Numerous studies have been done regarding primary health care clinics manned by nurses as primary health care providers. These studies have documented the successful use of nurses and physician's assistants in relation to acceptability, availability, accessibility, quality of care, and cost-effectiveness. Also emphasized is the continuity of care which has been provided by nurses in a primary role.

II. Assessing Rural Community Practice Potential

A. Definitions

1. Primary health care: The care a consumer receives at the point of contact with the health care system. The client receives continued care as an ambulatory consumer. The care consists of identification, management and/or referral of health problems, and the maintenance of the client's health by means of health promotion.

2. Ambulatory services: The provision of health care services to clients who travel to the provider to receive services.

3. Well-elderly: Those persons 55 years and older who function in a semi-independent or independent living situation.

B. Community Characteristics

1. Available health manpower.
2. Institutional care services.
3. Location and characteristics of supporting community services.

4. Geographic characteristics.
5. Location of major medical resources.
6. Population characteristics.
7. County statistical data related to numbers of aged, death rates, causes of death, and incidence and types of chronic disease.

III. Health Needs of the Elderly

A. Aging Process in Relation to the Four Dimensions of Man

1. Psycho-social
2. Physiological and Biological
3. Environmental and Life-style
4. Spiritual

B. Health organization: Range of services in a clinic setting.

IV. Economic Impact of Preventive Services for the Well-Elderly in Montana

V. Goals and Objectives of Well-Elderly Clinic

A. Alternative to Institutionalization

B. Wellness - Illness Continuum

1. Shift emphasis of health care to wellness.
2. Provide promotive and maintenance health care.

a. Multi-disciplinary Health Care
b. Health Screening Services
c. Referral
d. Health Teaching and Referral

VI. Development of Primary Health Care Model

AGENDA

Advisory Committee
Well-Elderly Screening Center Project

August 3, 1979

11:00 a.m. - 11:10 a.m.	Overview of Project	-	Karen Theisen
11:10 a.m. - 11:30 a.m.	Discussion		
11:30 a.m. - 11:40 a.m.	Model Presentation	-	Karen Theisen
11:40 a.m. - 12:00 noon	Discussion		

a) Where do we want to go from this point

b) Refinement

QUESTIONNAIRE

1. AGE _____

2. SEX M or F (Circle One)

3. MAIN SOURCE FOR TRANSPORTATION _____

4. WHAT PROBLEMS, IF ANY, DO YOU EXPERIENCE WHEN YOU SEEK MEDICAL CARE FOR YOUR HEALTH CONCERNS SUCH AS: BLOOD PRESSURE READING, VITAL SIGNS, PHYSICAL EXAMINATIONS, NUTRITIONAL GUIDANCE, EXERCISE, ETC.? (May check more than one)

   _____ DO NOT HAVE ANY PROBLEMS

   _____ MUST TRAVEL TOO FAR TO GET MEDICAL CARE

   _____ HAVE TO WAIT LONG PERIODS OF TIME AT THE PLACE I RECIEVE CARE

   _____ COST IS TOO HIGH

   _____ FEEL I AM TAKING UP TOO MUCH OF THE PHYSICIAN'S TIME

   _____ OTHER REASONS (Please specify)

5. WHAT DO YOU THINK CAN BE DONE TO CHANGE THE COMMUNITY'S HEALTH CARE SITUATION?

A PRIMARY HEALTH CARE SCREENING CENTER WILL PROVIDE MANY SERVICES INCLUDING: BASIC FOOT CARE, VISUAL AND HEARING TESTS, BLOOD PRESSURE CHECKS, PHYSICAL EXAMINATIONS, DIABETES SCREENING, COUNSELING, MEDICATION EVALUATION AND CONSULTATION, NUTRITIONAL ASSESSMENTS AND EDUCATION, PHYSICAL THERAPY COUNSELING, GENERAL HEALTH EDUCATION, AND REFERRAL.

6. DO YOU THINK THAT THIS COMMUNITY NEEDS A PRIMARY HEALTH CARE SCREENING CENTER?

   _____ YES

   _____ NO

   _____ DO NOT KNOW

REGISTERED NURSES AND STUDENTS IN HEALTH RELATED FIELDS ARE PREPARED TO OFFER HIGH QUALITY HEALTH CARE WITH THE USE OF HEALTH SCREENING FACILITIES. WHEN NECESSARY, THEY MAKE REFERRALS TO PHYSICIANS AND OTHER COMMUNITY AGENCIES.

7. WOULD YOU SEEK HEALTH CARE AT A SCREENING CENTER STAFFED BY REGISTERED NURSES AND/OR FACULTY AND STUDENTS IN HEALTH RELATED FIELDS?

   _____ YES, I WILL GIVE IT A TRY

   _____ YES, I WILL PROBABLY USE IT AS MY MAIN SOURCE OF CARE

   _____ NO, I DEFINITELY WON'T USE IT

   _____ I DON'T KNOW

This intern report was read and accepted by a staff member at:

Agency: Montana State Department of Health and Environmental Sciences

Address: Bureau of Health Planning and Resources Division
Helena, Montana 59601

The Western Interstate Commission for Higher Education

The Western Interstate Commission for Higher Education (WICHE), located in Boulder, Colorado, is a compact organization serving regional higher education needs in the 13 western states: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming. During its 25-year history, it has provided projects in higher education in a number of areas: professional student exchanges, health and human services, criminal justice, minority programs, and student internships.

The WICHE Intern Program

The WICHE Intern Program is a service-learning/student internship program for students in the 13 western states. The program provides work experiences for upper division undergraduate, and graduate and professional students. The internship involves a fulltime commitment for a period of 12-36 weeks in an approved agency, some with credit, all with paid stipends. The fields for student internships have been varied, with special efforts by WICHE to develop student experiences in areas traditionally lacking in practicum opportunities: humanities, multicultural education, economic development, energy, rural education, and handicapped education. The criteria for approval of a student internship "project" is that students perform professional-level work for the agency in which they are placed, most times completing a professional report "commissioned" by the sponsoring agency.

Services of the WICHE Intern Program

Although the Intern Program provides internships in a variety of fields contingent upon the sources of its funding, the services it provides are consistent in all internship projects:

- We locate the sponsoring agencies and work with them to develop projects for students;
- We recruit qualified students for the agency's selection of final intern(s);
- We assume responsibility for the accounting/bookkeeping functions which relate to internships, i.e., payment of weekly stipends, intern travel reimbursements, costs of publishing reports, liability insurance for students;
- We assist students to locate resource materials for the conduct of their project;
- We print intern reports and distribute them to agencies, depository libraries in the West, and others interested in reports;
- We evaluate the intern experience and conduct follow-ups with sponsors.

For further information, write WICHE Intern Program, WICHE, P.O. Drawer 'P', Boulder, Colorado 80302 or call (303) 443-6144.

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